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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,240	02/07/2002	Takuya Yamamoto	108384-00041	6547

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EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,240

Applicant(s)

YAMAMOTO ET AL.

Examiner

John J. Zimmerman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

OFFICE ACTION

Election/Restrictions

1. Claim 23 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made without traverse in Paper No. 5 titled Response to Restriction Requirement, received June 27, 2003.

Preliminary Amendment

2. The Preliminary Amendment filed with this application has been entered. Claims 1-25 are pending in this application with nonelected invention claim 23 withdrawn from consideration.

Specification

3. The disclosure is objected to because of the following informalities: The specification refers to specific claims (e.g. see page 6, line 24). The specification should not refer to specific claims since the content and numbering of the pending claims may change during prosecution and printing of a patent that may issue from this application. Appropriate correction is requested wherever the specification may refer to specific claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-25 are rejected under 35 U.S.C. 102(a) as being anticipated by Yamamoto (Japanese publication 2001-308477).

6. Yamamoto is a publication published within a year of the filing date of this pending application. Yamamoto clearly anticipates the claimed invention of this pending application (e.g. see claims 1-25 of Yamamoto). Yamamoto may have the same inventive entity as this pending application and therefore may not qualify as prior art under 35 U.S.C. 102(a). It is not clear, however, if "Kataoka Taku" of the Yamamoto publication is the same person as "Kataoka

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Takashi" of this pending application. Applicants must clarify this issue so it can be determined whether the Yamamoto publication is a different inventive entity or the same inventive entity as this pending application.

7. Claims 1-2 and 24 are rejected under 35 U.S.C. 102(a) as being anticipated by Yamamoto (U.S. Patent Application Publication 2002/0004123 A1, filed June 20, 2001).

8. Yamamoto (different inventive entity than this pending application) discloses a surface treated copper foil wherein a nodular treatment can be applied to one side of the copper foil and a nickel layer can be applied to the other side of the copper foil (e.g. see paragraph [0011]). The thickness of the nickel layer can be between 0.01 μm to 4 μm , but at least a 1 μm layer is considered (e.g. see paragraph [0015]) and the nickel layer can be formed on the shiny side of the carrier copper foil (e.g. see paragraph [0033]). Yamamoto's nickel layer may further contain cobalt (e.g. paragraph [0017]) and the pending claims do not require any particular content of nickel or cobalt in their nickel and cobalt layers. The copper foil may include a copper carrier, a nickel layer a copper foil layer and a nodular treatment (e.g. see Figure 1) and the carrier can be the peelable type with an organic layer (e.g. see paragraph [0014]). Regarding the intended use limitation "for processing for laser hole formation", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-7, 11-13, 17-21 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (U.S. Patent Application Publication 2002/0004123 A1, filed June 20, 2001) in view of Kataoka (U.S. Patent 6,270,889), Yoshioka (U.S. Patent 6,541,126) or Kataoka (U.S. Patent Application Publication 2002/0090497 A1).

11. Yamamoto (different inventive entity than this pending application) discloses a surface treated copper foil wherein a nodular treatment can be applied to one side of the copper foil and a nickel layer can be applied to the other side of the copper foil (e.g. see paragraph [0011]). The thickness of the nickel layer can be between 0.01 μm to 4 μm , but at least a 1 μm layer is considered (e.g. see paragraph [0015]) and the nickel layer can be formed on the shiny side of the carrier copper foil (e.g. see paragraph [0033]). Yamamoto's nickel layer may further contain cobalt (e.g. paragraph [0017]) and the pending claims do not require any particular content of nickel or cobalt in their nickel and cobalt layers. The copper foil may include a copper carrier, a nickel layer a copper foil layer and a nodular treatment (e.g. see Figure 1) and the carrier can be the peelable type with an organic layer (e.g. see paragraph [0014]). Regarding the intended use limitation "for processing for laser hole formation", a recitation of the intended use of the

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claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). Yamamoto may differ from claims 5-7 and 11-13 in that the composition of the organic release agent and the roughness of the carrier foil may not be specified. Kataoka '889 (e.g. claim 1), Yoshioka (e.g. column 4, lines 30-49) and Kataoka '497 (e.g. see paragraph [0040]) all clearly show common organic release agents now currently used for carrier foils. In addition Yoshioka (e.g. Table 1) and Kataoka '497 (e.g. see paragraph [0033]) further show conventional surface roughnesses of carrier foils. In view of Kataoka and Yoshioka, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use conventional organic release agents and use carrier foils with conventional surface roughnesses in the invention of Yamamoto because Yamamoto does not specify his release agent composition or his carrier surface roughness and the Kataoka and Yoshioka references show these compositions and roughnesses are conventional for carrier foils currently being used in industry.

12. Claims 1 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker (U.S. Patent 6,531,950) in view of Lee (U.S. Patent 5,908,542).

13. Becker discloses an electrolytic copper foil with a copper nodule treatment on one side and a nickel flash treatment on both sides (e.g. see column 13, lines 2-5). Becker differs from the claims in that Becker may not disclose the thickness of the nickel flash treatment. Lee,

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however, clearly shows that typical nickel flash treatments are between 0.2-3 microns and more preferably between 0.7 to 1.5 microns (e.g. see column 7, lines 18-25). In view of Lee, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a nickel flash treatment between 0.7-1.5 microns thick on the copper foil of Becker because Lee discloses that this is a typical thickness of a nickel flash treatment. Regarding the intended use limitation "for processing for laser hole formation", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Conclusion

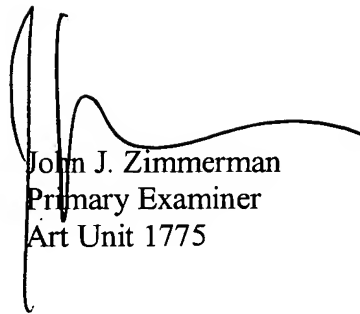
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (703) 308-2512. The examiner can normally be reached on 8:30am-5:00pm, M-F. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

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John J. Zimmerman
Primary Examiner
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jjz
July 11, 2003